DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake:	CONNECTICUT LAKE, FIRST	Lake Area (ha):	1136.07
Town:	PITTSBURG	Maximum depth (m):	49.7
County:	Coos	Mean depth (m):	17.0
River Basin:	Connecticut	Volume (m^3):	193502000
Latitude:	45°05'00" N	Relative depth:	1.3
Longitude:	71°15'00" W	Shore configuration:	2.61
Elevation (ft):	1631	Areal water load (m/yr):	13.26
Shore length (m):	31200	Flushing rate (yr^{-1}):	0.80
Watershed area (ha):	21445.1	P retention coeff.:	0.52
% watershed ponded:	3.7	Lake type:	natural w/dam

BIOLOGICAL:		1 February 1995	16 August 1994
DOM. PHYTOPLANKTON (% TOTAL)	#1	ASTERIONELLA 70%	MICROCYSTIS 35%
	#2	ANABAENA 15%	CHRYSOSPHAERELLA 25%
	#3	RHIZOSOLENIA 10%	
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.63
DOM. ZOOPLANKTON (% TOTAL)	#1	ROTIFER SPP. 37%	POLYARTHRA 42%
	#2	KELLICOTTIA 20%	DAPHNIA 23%
	#3	KERATELLA 20%	
ROTIFERS/LITER		24	12
MICROCRUSTACEA/LITER		3	11
ZOOPLANKTON ABUNDANCE (#/L)		30	26
VASCULAR PLANT ABUNDANCE			Sparse
SECCHI DISK TRANSPARENCY (m)			3.5
BOTTOM DISSOLVED OXYGEN (mg/L)		10.7	7.2
BACTERIA (E. coli, #/100 ml)	#1		4
	#2		1
	#3		

SUMMER THERMAL STRATIFICATION:

stratified

Depth of thermocline (m): 8.5
Hypolimnion volume (m^3) : 99246500
Anoxic volume (m^3) : None

CHEMICAL:

Lake: CONNECTICUT LAKE, FIRST
Town: PITTSBURG

	1 February 1995		16 August 1994		
DEPTH (m)	10.0	20.0	4.0	9.0	35.0
pH (units)	6.7	6.6	7.0	6.8	6.4
A.N.C. (Alkalinity)	6.7	7.2	5.7	5.9	6.4
NITRATE NITROGEN	0.20	0.20	0.22		0.24
TOTAL KJELDAHL NITROGEN	0.19	0.17	0.30	< 0.10	< 0.10
TOTAL PHOSPHORUS	0.007	0.007	0.007	0.022	0.027
CONDUCTIVITY (µmhos/cm)	30.0	30.1	30.4	31.3	31.6
APPARENT COLOR (cpu)	21	21	28	28	50
MAGNESIUM			0.70		
CALCIUM			3.5		
SODIUM			0.8		
POTASSIUM			0.38		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	3	3	4		3
TN : TP	56	53	74		
CALCITE SATURATION INDEX			3.0		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

D.O.	S.D.	PLANT	CHL	TOTAL	CLASS
0	2	0	0	2	Oligo.

COMMENTS:

1. This pond was previously surveyed and trophically classified in 1980. There was no change in the classification although the water clarity was much less in 1994 (12 feet versus 24 feet in 1980). The atypical temperature and oxygen values near the bottom were not present in 1980. A blue-green alga was the dominant net phytoplankton in 1994 whereas a diatom was dominant in 1980.

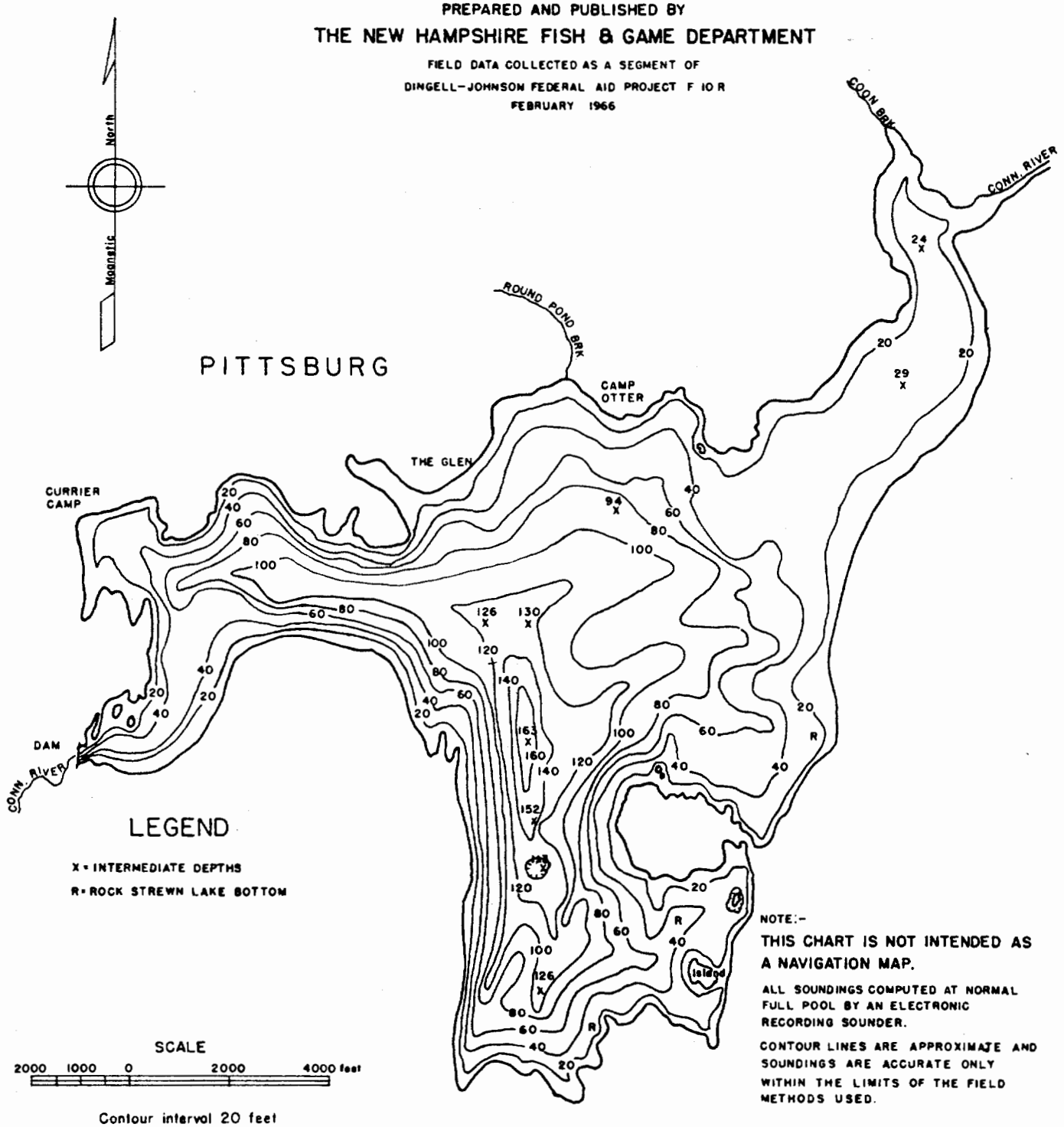
2. Lake water level appeared to be down at least three feet during the summer sampling.

3. The dominant rotifer in the winter was probably Synchaeta, but it could not be identified conclusively because of distortion by the preservative.

FIRST
CONNECTICUT LAKE
DEPTH CONTOUR CHART

PREPARED AND PUBLISHED BY
THE NEW HAMPSHIRE FISH & GAME DEPARTMENT

FIELD DATA COLLECTED AS A SEGMENT OF
DINGELL-JOHNSON FEDERAL AID PROJECT F 10 R
FEBRUARY 1966



LEGEND

X = INTERMEDIATE DEPTHS

R = ROCK STREWN LAKE BOTTOM

SCALE

2000 1000 0 2000 4000 feet

Contour interval 20 feet

NOTE:-

THIS CHART IS NOT INTENDED AS A NAVIGATION MAP.

ALL SOUNDINGS COMPUTED AT NORMAL FULL POOL BY AN ELECTRONIC RECORDING SOUNDER.

CONTOUR LINES ARE APPROXIMATE AND SOUNDINGS ARE ACCURATE ONLY WITHIN THE LIMITS OF THE FIELD METHODS USED.

FIELD DATA SHEET

LAKE: CONNECTICUT LAKE, FIRST TOWN: PITTSBURG
DATE: 08/16/94 WEATHER: SUNNY; 70'S

	DEPTH (M)	TEMP (°C)	*DISSOLVED OXYGEN	OXYGEN SATURATION
	0.1	18.0	9.7	102 %
	1.0	18.0	9.7	102 %
	2.0	17.9	9.6	102 %
	4.0	17.8	9.6	102 %
	6.0	17.5	9.4	99 %
	7.0	17.6	9.5	99 %
	8.0	17.3	9.4	98 %
	9.0	11.0	8.7	80 %
	10.0	9.6	9.5	83 %
	13.0	7.0	10.3	85 %
	15.0	6.2	10.7	86 %
	20.0	4.9	10.9	85 %
	25.0	4.3	10.7	83 %
	30.0	4.3	10.6	82 %
	32.0	4.2	10.6	81 %
	34.0	4.2	10.6	81 %
	35.0	4.2	10.5	81 %
	36.0	4.2	10.3	80 %
	37.0	4.2	10.4	80 %
	38.0	4.2	5.0	38 %
	39.0	4.4	0.3	2 %
	40.0	4.6	3.6	28 %
	41.0	5.0	6.9	54 %
	42.0	5.1	7.1	57 %
	43.0	5.3	7.1	56 %
	44.0	5.3	7.2	56 %

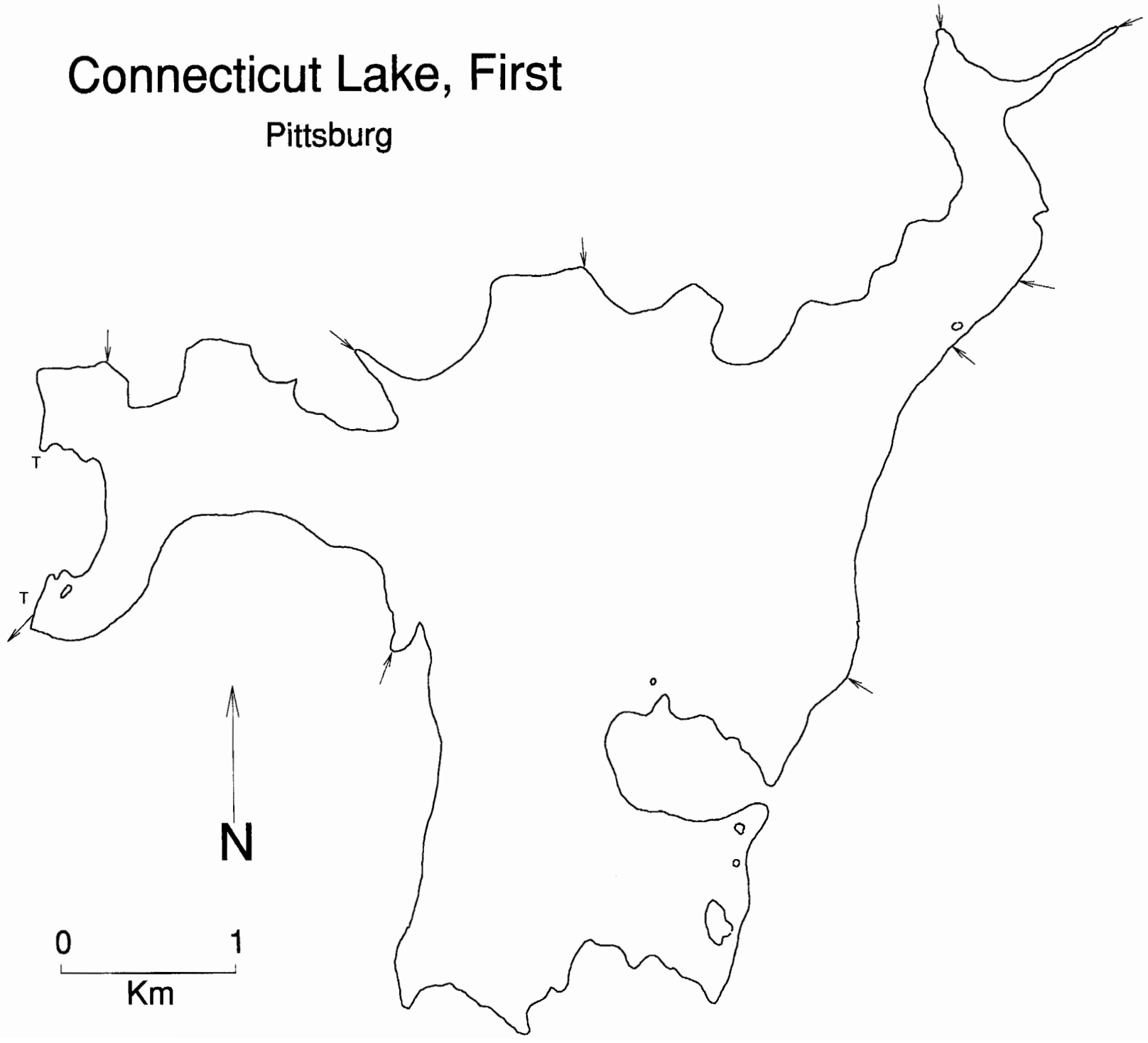
SECCHI DISK (m): 3.5
BOTTOM DEPTH (m): 47.7
TIME: 1530

*Dissolved oxygen values are in mg/L

COMMENTS:

1. A sharp, stable thermocline was present; the metalimnion was very narrow.

2. The cause of the depressed oxygen levels around the 39 meter depth is not known. The warmer temperatures below this depth should be less dense and not exist here.


Connecticut Lake, First
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AQUATIC PLANT SURVEY

LAKE: CONNECTICUT LAKE, FIRST TOWN: PITTSBURG DATE: 08/16/94

Key	PLANT NAME		ABUNDANCE
	GENERIC	COMMON	
T	Typha	Cattail	Sparse
	Gramineae	Grass family	Scattered

OVERALL ABUNDANCE: Sparse

GENERAL OBSERVATIONS:

1. Essentially no aquatic plants were observed in the lake. Cattails were present on shore near the outlet. Grasses or grass-like plants, which are not depicted on the map, were scattered along the shore in rocky areas exposed by the lowered water level.
2. Sweet gale was common along the entire shoreline.
3. Exposed rocks and stumps from the lowered water level were a hazard to navigation; plants may have been missed in the backs of some of the shallow coves that could not be reached by boat.